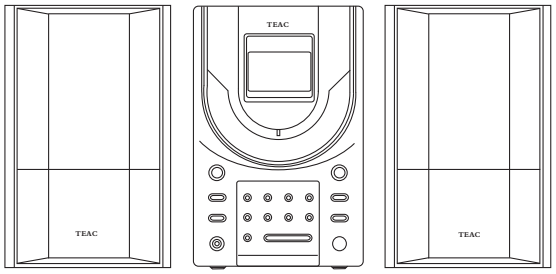


TEAC

SERVICE MANUAL

EX-M1

CD Receiver System

NOTES

- PC board shown are viewed from parts side.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- ⚠ Parts marked with this sign are safety critical components. they must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.

CONTENTS

1 SAFETY INFORMATION 2
2 SPECIFICATIONS 3
3 ADJUSTMENT AND CHECKS 4
4 EXPLODED VIEW AND PARTS LIST 6
5 PC BOARDS AND PARTS LISTS 10
6 WIRING DIAGRAM 16
7 INCLUDED ACCESSORIES 18

1 SAFETY INFORMATION

SAFETY INFORMATION

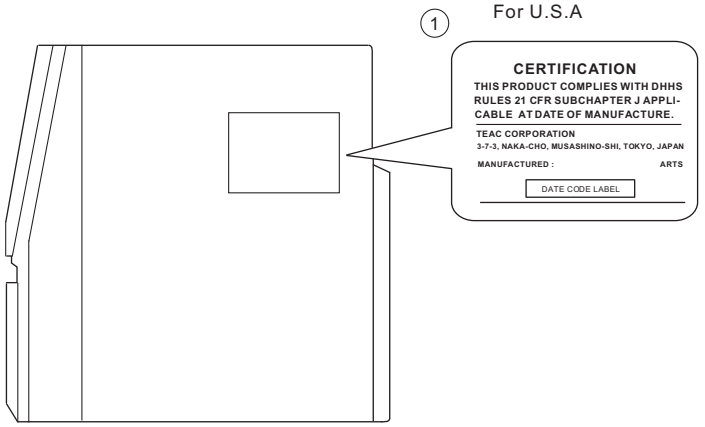
This product has been designed and manufactured according to FDA regulations " title 21, CFR, chapter 1,subchapter J,based on the Radiation Control for Health and Safety Act of 1968" and is classified as class 1 laser product. There is not hazardous invisible laser radiation during operation because invisible laser radiation emitted inside of this product is completely confined in the protective housings. The label required in this regulation is shown ①.

• CAUTION

USE OF CONTROLS OR ADJUSTMENT OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

DO NOT REMOVE THE PROTECTIVE HOUSING USING SCREWDRIVER.

IF THIS PRODUCT DEVELOPS TROUBLE, MAKE A CONTACT WITH OUR SERICEMAN, AND DO NOT USE THE PRODUCT A TROUBLED STATE.



Optical pickup:	Type :	SF-P200Z
	Manufacturer :	SANYO Electric Co., Ltd.
	Laser output :	Less than 0.5 mW on the objective lens
	Wavelength :	765 - 815 nm

2 SPECIFICATIONS

CD PLAYER Section

Pickup:	3-beam pick-up
Wavelength :	790 nm
Audio frequency response :	20 Hz ~ 22 kHz

CASSETTE DECK Section

Track System:	4 track, 2 channel stereo
Tape Speed:	4.76 cm/sec
Wow and Flutter:	0.4% or less

TUNER Section

System :	PLL quartz-locked digital synthesizer system
Tuning range :	FM : 87.50 ~ 108.0 MHz (100kHz step) AM : 530 to 1710 kHz (10 kHz step)
Antenna :	FM pigtail antenna AM bar antenna (built-in)

SPEAKER SYSTEM Section

System:	2-way shielded box
Impedance:	3 ohm
Dimension (W x H x D):	(5-3/4 x 9-3/16 x 7-7/8) inches 146 x 233 x 200 mm
Weight:	5-7/16lb (2.45 kg)

GENERAL

Output power:	5W x 2
Power requirements:	120V AC, 60Hz
Power consumption:	25W
Dimension (W x H x D):	(5-7/8 x 9-3/16 x 8-9/16) inches 150 x 233 x 218 mm
Weight:	3-5/8lb (1.65 kg)

Standard Accessories: Remote Control Unit (RC-872) x 1
Owner's Manual x 1
Warranty Card x 1

- Design and specifications are subject to change without notice.
- Photos and illustrations may differ slightly from production models.

3 ADJUSTMENTS AND CHECKS

3-1 TUNER SECTION

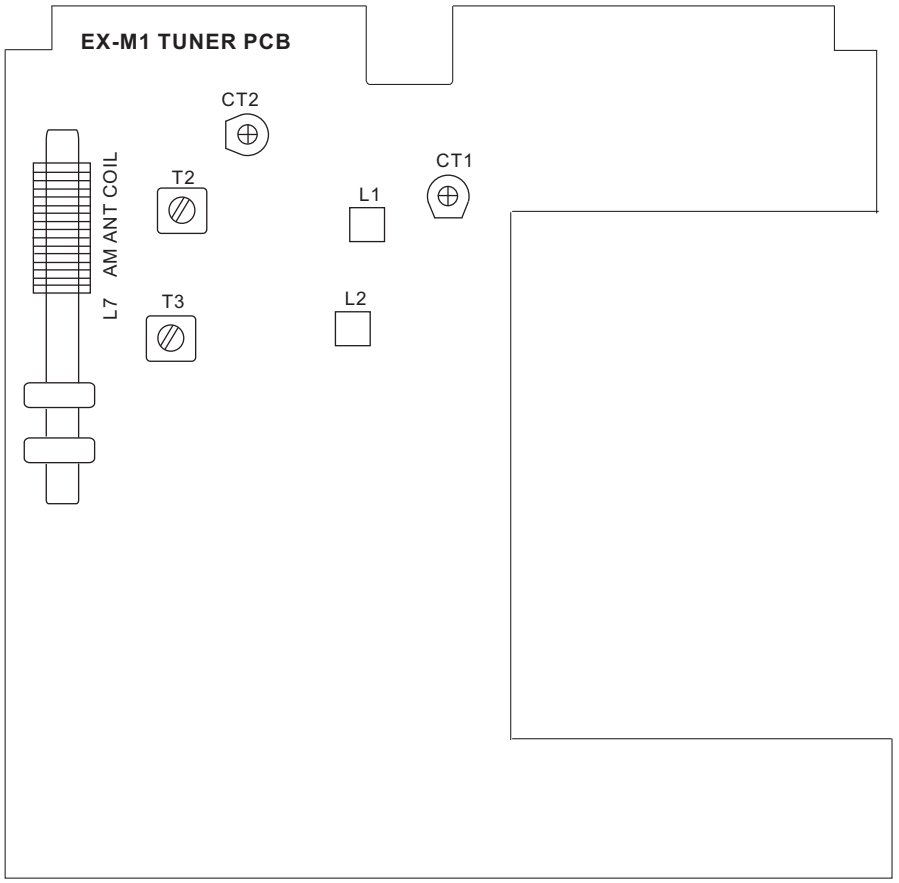
- Use a screwdriver with a plastic or ceramic grip for all adjustment.

3-1-1 FM adjustment

1. Set the function switch to the FM position.
2. Connect the signal generator output through a 75 ohm dummy antenna to "ANT" on MAIN PCB.
3. Connect the oscilloscope to the speaker terminal.
4. Set the signal generator as listed in the alignment chart.

3-1-2 AM adjustment

1. Set the function switch to the AM position.
2. Connect the test loop antenna across the output of the signal generator.
3. Connect the oscilloscope to the speaker terminal.
4. Set the signal generator as listed in the alignment chart.

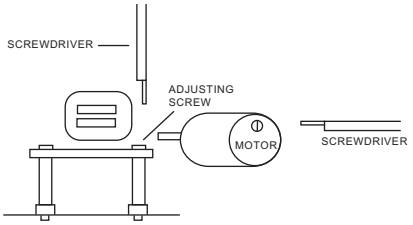


3-1-3 FM/AM alignment chart

ITEM	SG SETTING	TUNER SETTING	ADJUSTMENT POINT	ADJUSTMENT
FM				
1. FM band	87.5MHz 1kHz, +/-22.5kHz dev.	87.5MHz	L2	Adjust for max.output.
2. Tracking	90MHz 1kHz, +/-22.5kHz dev.	90MHz	L1	Adjust for max. output and best waveform.
	106MHz 1kHz, +/-22.5kHz dev.	106MHz	CT1	
	Repeat step 2			
AM				
1. IF adjustment	450kHz 1kHz, 30% mod	600kHz	T3	Adjust for max.output.
2. AM band	530kHz 1kHz, 30% mod	530kHz	T2	Adjust for max. output.
3. Tracking	600kHz 1kHz, 30% mod	600kHz	L7 AM ANT COIL	Adjust for max. output and best waveform.
	1400kHz 1kHz, 30% mod	1400kHz	CT2	
	Repeat step 3			

3-2 CASSETTE SECTION

1. Set the FUNCTION SELECTOR SWITCH TO TAPE.
2. Connect a Scope & VTVM across the speaker output.
3. Insert the 8KHz tape in to cassette deck and push play BUTTON.
4. ADJUST HEAD for speaker maximum output.

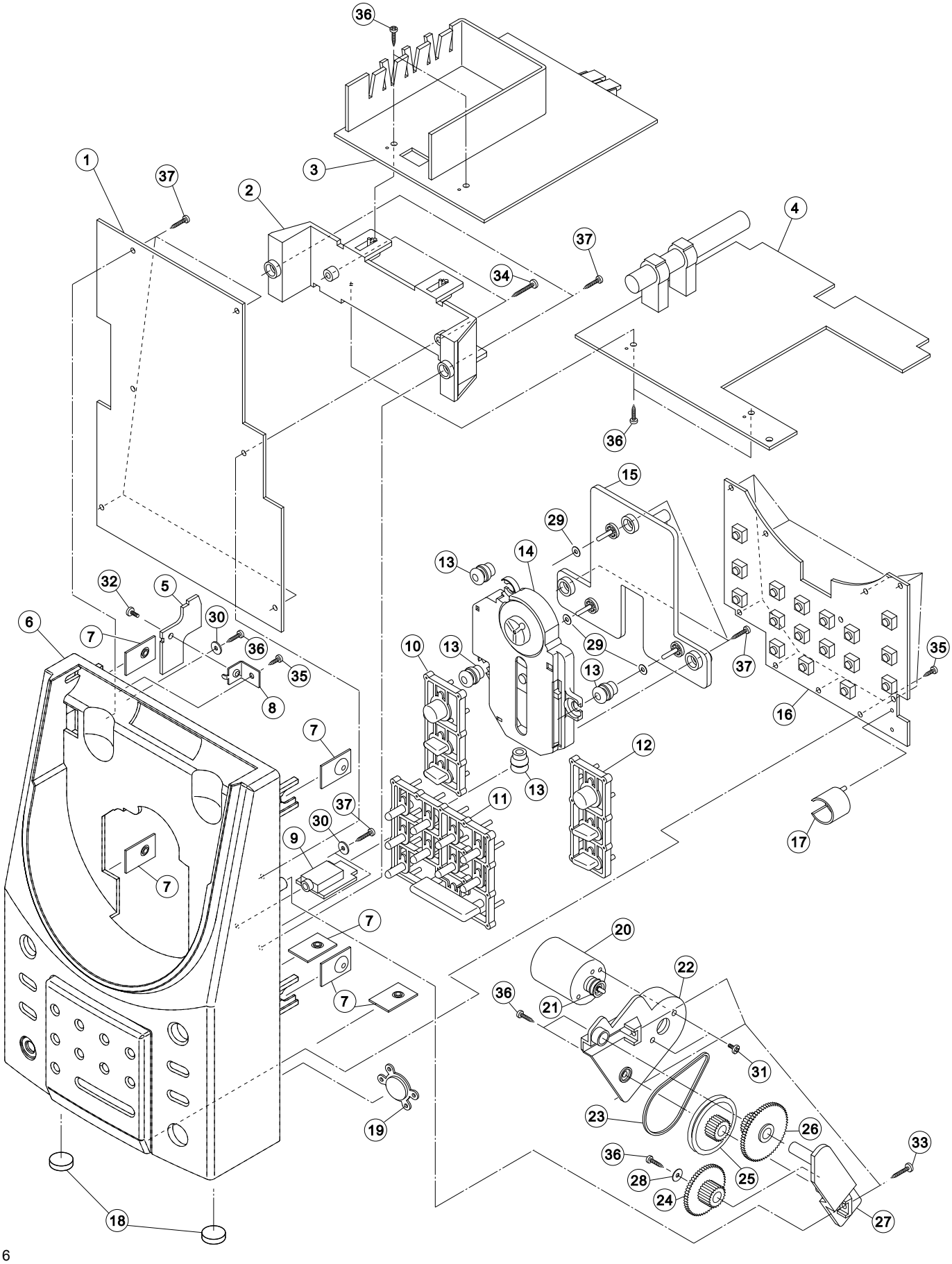


3-3 CD SECTION

Auto alignment.

4 EXPLODED VIEWS AND PARTS LIST

EXPLODED VIEW - 1

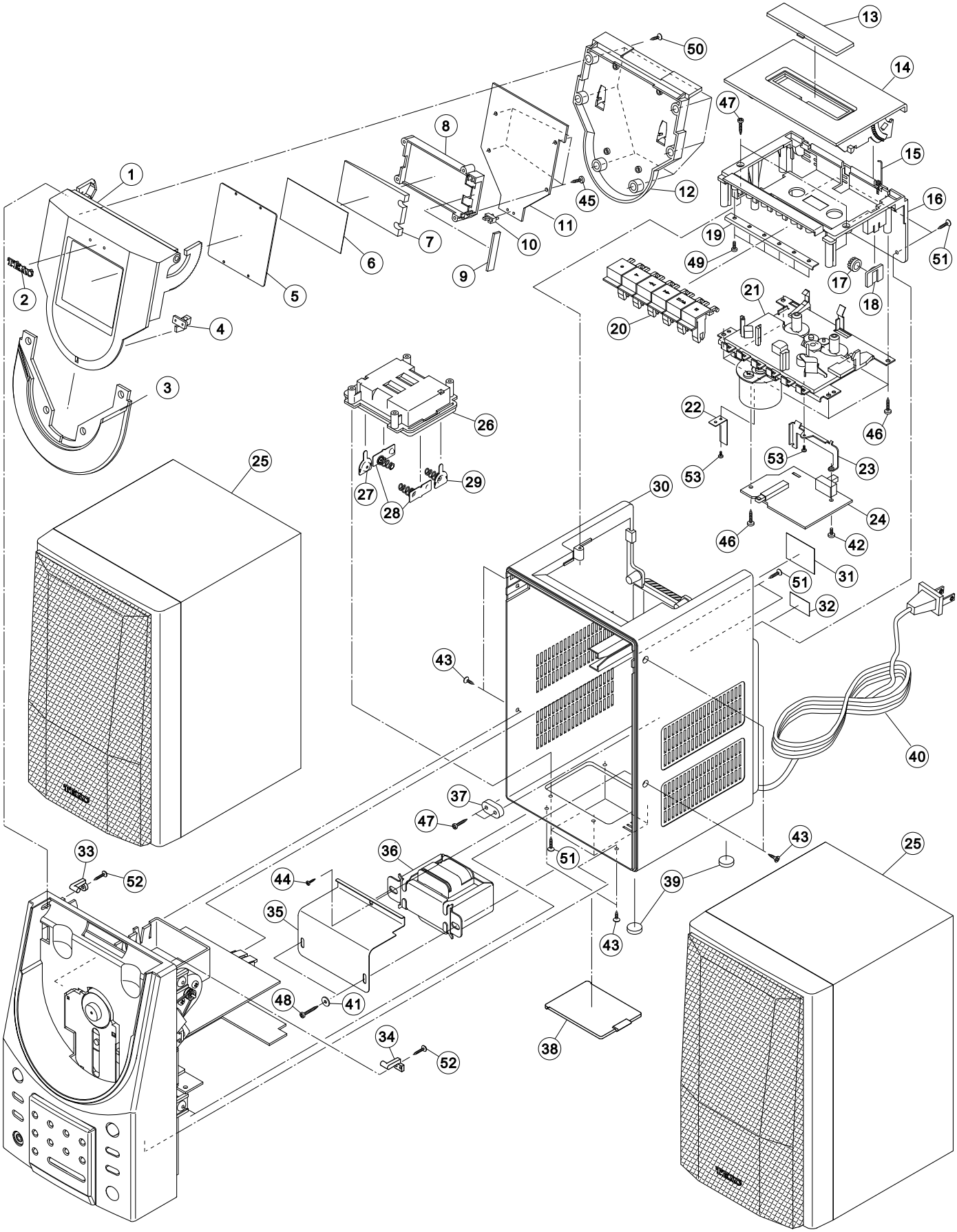


EXPLODED VIEW-1

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
1-1	01-EXM100030-00	CD PCB ASSY	
1-2	56-07EXM1780-10	PCB BRACKET	
1-3	01-EXM100007-00	POWER PCB ASSY	
1-4	01-EXM100002-00	TUNER PCB ASSY	
1-5	01-EXM100023-00	O/C SWITCH PCB ASSY	
1-6	56-04EXM10A1-B0	FRONT CABINET	
1-7	61-61DCD2000-00	LOCK WASHER	
1-8	61-11DV60000-00	PCB BRACKET	
1-9	01-EXM100009-00	H/P PCB ASSY	
1-10	56-54EXM11A1-10	FUNCTION KNOB-L	
1-11	56-54EXM10A1-10	FUNCTION KNOB-M	
1-12	56-54EXM12A1-10	FUNCTION KNOB-R	
1-13	58-61AC230B3-00	SHOCK ABSORBER	
1-14	71-70DA23Z01-02	CD MECHANISM (SANYO)	
1-15	56-07EXM1280-10	CD DECK BRACKET	
1-16	01-EXM100005-00	KEY PCB ASSY	
1-17	56-07EXM1180-10	REMOTE BRACKET	
1-18	58-261230001-00	RUBBER FOOT (HARD)	
1-19	56-57EXM1520-40	REMOTE LENS	
1-20	58-44NSX2000-00	CD MOTOR	
1-21	56-760000000-JA	DOOR MOTOR PULLY	
1-22	56-24EXM1380-10	GEAR BRACKET-A	
1-23	58-04NSX2000-00	DRIVE BELT	
1-24	56-24EXM1180-10	GEAR -B	
1-25	56-24EXM1280-10	GEAR -C	
1-26	56-24EXM1080-10	GEAR -A	
1-27	56-24EXM1480-10	GEAR BRACKET-B	
1-28	68-013010057-00	METAL WASHER	
1-29	68-023008042-00	FIBRE WASHER	
1-30	68-013210107-00	METAL WASHER	
1-31	66-220300431-00	MACHINE SCREW MS/BH3x4	
1-32	66-230300631-00	MACHINE SCREW MS/PH3x6	
1-33	66-421301431-00	SELF-TAPPING SCREW TA/BH3x14	
1-34	66-421301831-00	SELF-TAPPING SCREW TA/BH3x18	
1-35	66-431300831-00	SELF-TAPPING SCREW TA/PH3x8	
1-36	66-431301031-00	SELF-TAPPING SCREW TA/PH3x10	
1-37	66-431301231-00	SELF-TAPPING SCREW TA/PH3x12	

EX-M1

EXPLODED VIEW - 2



EXPLODED VIEW-2

REF. NO		PARTS NO.	DESCRIPTION	REMARKS
2-1		56-14EXM10A1-10	CD DOOR	
2-2		56-58EXM1180-10	BADGE LOGO - TEAC	
2-3		56-57EXM1110-70	CD DOOR LENS	
2-4		56-57EXM1200-70	POWER LENS	
2-5		56-57EXM1300-70	DISPLAY LENS	
2-6		57-26EXM1000-00	FILTER SHEET	
2-7		56-57EXM1400-70	BACK LIGHT LENS	
2-8		56-07EXM1090-10	BACK LIGHT LENS BRACKET	
2-9		01-EXM100016-00	LED PCB ASSY	
2-10		56-07EXM1880-10	POWER LED BRACKET	
2-11		01-EXM100004-00	DISPLAY PCB ASSY	
2-12		56-14EXM11A1-10	CD DOOR BASE	
2-13		56-57EXM1600-70	CASS DOOR LENS	
2-14		56-13EXM10A1-10	CASS DOOR	
2-15		61-97EXM1000-00	CASS DOOR SPRING	
2-16		56-07EXM16A1-10	CASS DOOR BRACKET	
2-17		56-24EXM1580-10	CASS GEAR	
2-18		56-24EXM1680-10	CASS GEAR BRACKET	
2-19		61-11EXM1001-00	MTG-BRACKET CASS KNOB	
2-20		56-55EXM10A1-10	CASS KNOB-6KEY	
2-21		71-06EXM1000-20	F/CASS DECK	
2-22		61-76SCD6600-00	RECORDING PLATE	
2-23		61-11EXM1000-00	REC.PCB BRACKET	
2-24		01-EXM100020-00	R/P PCB ASSY	
2-25		58-01EXM1000-00	SPEAKER BOX ASSY	
2-26		56-06EXM11A1-A0	BATTERY BOX	
2-27		61-250066000-00	BATTERY CONTACT PLATE (+)	
2-28		61-26SX88000-00	BATTERY SPRING (+/-)	
2-29		61-260066000-00	BATTERY CONTACT SPRING (-)	
2-30		56-05EXM10A1-B0	REAR CABINET	
2-31		57-083225001-07	PVC PLATE	
2-32		57-082213001-07	PVC PLATE	
2-33		56-07EXM1380-10	CD DOOR SHAFT BRACKET-L	
2-34		56-07EXM1480-10	CD DOOR SHAFT BRACKET-R	
2-35		61-11EXM1002-00	SHIELDING PLATE	
2-36	⚠	18-2573EXM10-19	TRANSFORMER EI-57 120V	
2-37		56-07EXM1580-10	AC CORD PLATE	
2-38		56-06EXM10A1-A0	BATTERY DOOR	
2-39		58-261230001-00	RUBBER FOOT (HARD)	
2-40		45-111830104-06	AC CORD SPT-2 6FT CUL	
2-41		68-013210107-00	METAL WASHER	
2-42		66-230300631-00	MACHINE SCREW MS/PH3x6	
2-43		66-250300831-00	MACHINE SCREW MS/KH3x8	
2-44		66-421260831-00	SELF-TAPPING SCREW TA/BH2.6x8	
2-45		66-421301031-00	SELF-TAPPING SCREW TA/BH3x10	
2-46		66-421301231-00	SELF-TAPPING SCREW TA/BH3x12	
2-47		66-431301231-00	SELF-TAPPING SCREW TA/PH3x12	
2-48		66-431301631-00	SELF-TAPPING SCREW TA/PH3x16	
2-49		66-432300631-00	SELF-TAPPING SCREW TB/PH3x6	
2-50		66-451301031-00	SELF-TAPPING SCREW TA/KH3x10	
2-51		66-451301231-00	SELF-TAPPING SCREW TA/KH3x12	
2-52		66-481261231-00	SELF-TAPPING SCREW TA/WH2.6x12	
2-53		66-520200331-00	SELF-TAPPING SCREW TT/BH2x3	

5 PC BOARDS AND PARTS LIST

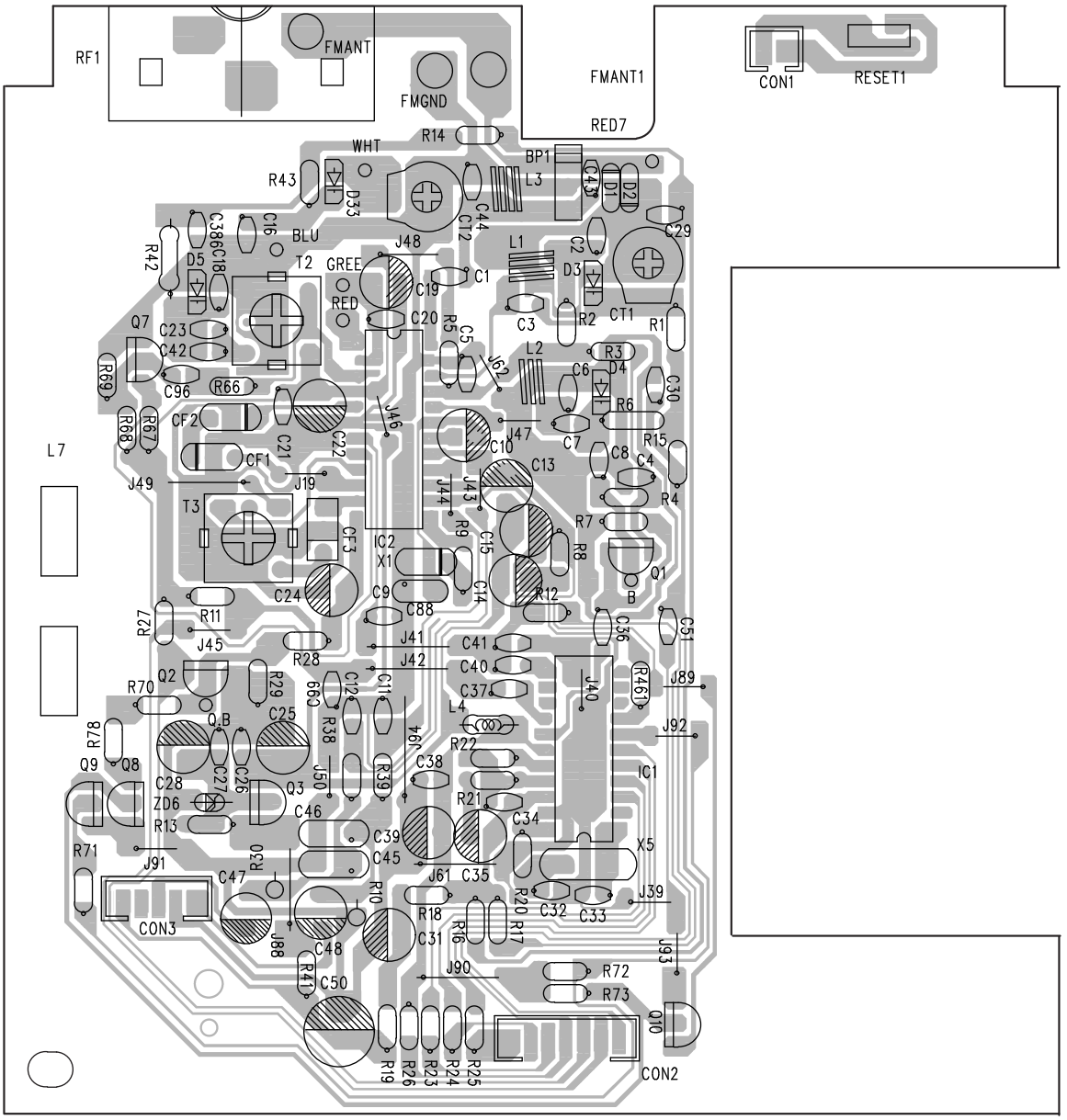
TUNER PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	01-EXM100002-00	TUNER BOARD ASSY	
	48-EXM100002-00	TUNER PCB	
	32-211801100-00	FERRITE BAR 10X80MM	
CON2	43-9A2001071-00	WAFER 7 PINS 180C	
CF1	31-210705100-20	CER.FILTER LT10.7MA5-A	
CF3	31-245003015-20	CER.FILTER LTP450B	
CT1,2	28-120110100-02	TRIMMER 20PF	
D1,2	15-0001N4148-00	DIODE - 1N4148	
D3,4	15-SVC201SPA-11	VAR DIODE SVC201SPA	
D5,33	15-SVC321SPA-11	VAR DIODE SVC321SPA	
IC1	16-LC7213100-01	IC-LC72131	
IC2	16-LA1823000-00	IC-LA1823	
L1	38-204510004-00	FM COIL 4.5X4.5TX0.8MM	
L2,3	38-203510004-00	FM COIL 4.5X3.5TX0.8MM	
L7	38-206820010-00	AM COIL 68:20T	
Q2,8,9,10	11-9014C0001-00	TR-9014C	
Q3	11-8050C0002-00	TR-8050C	
T2	40-0000660R2-18	IFT 660R (RED)	
T3	40-0000A0494-18	IFT A049 (YELLOW)	
X1	31-610705021-01	CDA 10.7MG1-A	
X5	31-145004000-18	CRYSTAL 4.500MHZ	
ZD6	12-156103100-00	ZENER DIODE 5.6V	

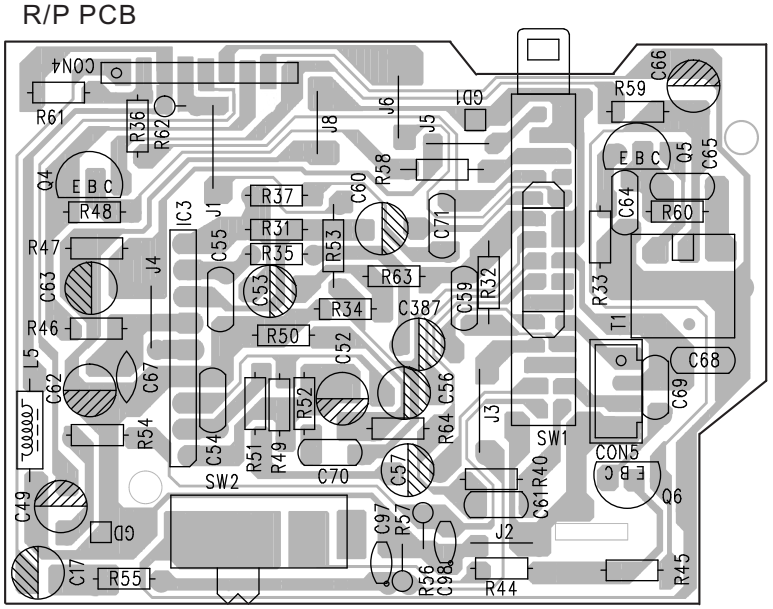
R/P PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	01-EXM100020-00	R/P PCB ASSY	
	48-EXM100020-00	RECORDER PCB	
CON5	43-9A2001041-00	WAFER 4P P=2MM	
IC3	16-BA3308000-02	IC-BA3308	
Q4,6	11-9015C0001-00	TR-9015C	
Q5	11-9014C0001-00	TR-9014C	
T1	40-621000100-08	IFT- 621 (BLK)	
SW1	41-191100100-03	PUSH SWITCH	
SW2	41-132212809-0V	SLIDE SWITCH	

TUNER PCB



R/P PCB



EX-M1

CD PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	01-EXM100030-00	CD BOARD ASSY	
	48-EXM100030-02	CD PCB	
CN5	43-9A1501061-00	WAFER 6PIN P=1.5MM	
CON305	43-9B2001051-00	WAFER 5PIN P=2MM	
CON410	43-9B1001161-00	WAFER 16P P=1MM	
CON413	43-9A1001301-00	WAFER 30P P=1MM	
D403,404, D407-409,411, D412,413,415-418 D420-423	15-0001N4148-00	DIODE 1N4148	
IC301	16-LB1641000-01	IC- LB1641	
IC302	16-LA6541D00-01	IC-LA6541D	
IC303	16-LC78622NE-00	IC- LC78622NE	
IC304	16-LA9241M00-01	IC- LA9241M	
IC401	16-LC5870082-00	IC- LC58P7008-1P09	
L301,302	38-310000000-30	INDUCTORS 100UH	
Q301,302,403, Q404,410,411	11-9015C0001-00	TR-9015C	
Q307-310	11-2SD1936T0-03	TR-2SD1936T	
Q311	11-2SA134602-03	TR-2SA1346	
Q401,402,405, Q406,407,412	11-9014C0001-00	TR-9014C	
X301	31-316935001-01	RESONATOR - CSTLS16.M9X55-B0	
X401	31-104000500-18	CRYSTAL 4.0MHz	
X402	31-132762036-00	CRYSTAL 32.768KHz	
ZD301,401	12-156103100-00	ZENER DIODE 5.6V	

O/C SWITCH PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	01-EXM100023-00	O/C SWITCH PCB ASSY	
	48-EXM100023-00	CD O/C SWITCH PCB	
SW1,2	41-071000001-00	MICRO SWITCH	

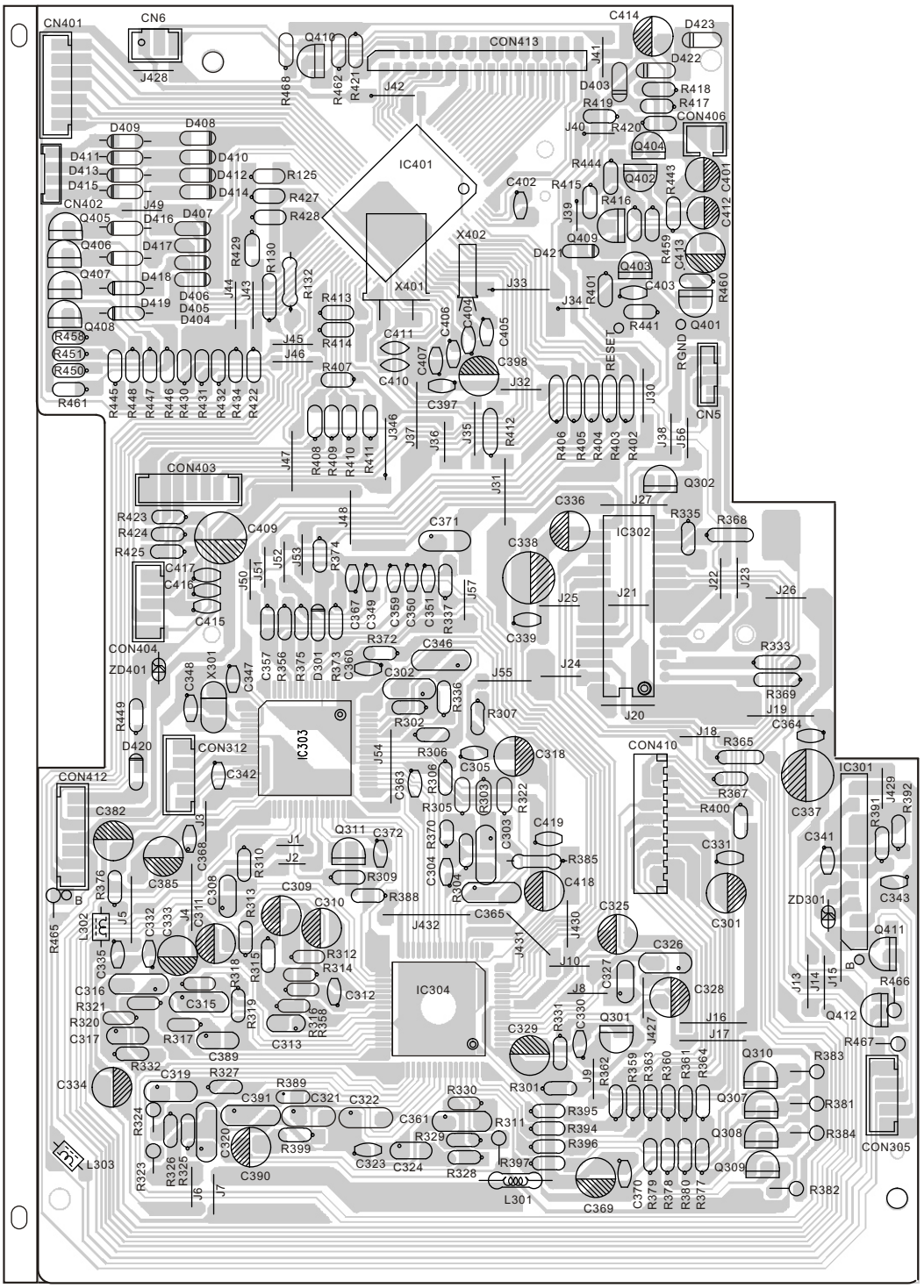
H.P PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	01-EXM100009-00	H.P PCB ASSY	
	48-EXM100009-00	H.P PCB	
PH1	43-433802005-01	PHONE JACK /SW	

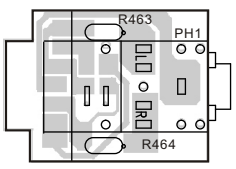
LED PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	01-EXM100016-00	LED PCB ASSY	
	48-EXM100016-00	LED PCB	
LED1,2	13-1SB14E200-00	LED D5MM (BLUE)	

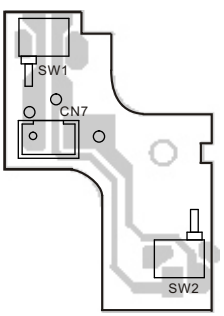
CD PCB



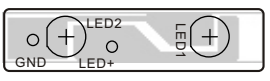
H/P PCB



O/C SW PCB



LED PCB



EX-M1

POWER PCB ASSY

REF. NO		PARTS NO.	DESCRIPTION	REMARKS
		01-EXM100007-00	POWER PCB ASSY	
		48-EXM100007-11	POWER PCB	
C745,746	⚠	26-351030300-00	CE-25V 1000UF	
C757	⚠	26-353330300-00	CE-25V 3300UF	
CON701		43-9A2001071-00	WAFER 7PIN P=2MM	
CON702,704		43-9A2001051-00	WAFER 5PIN P=2MM	
CON703		43-9A2001091-00	WAFER 9PIN P=2MM	
CON705		43-9A2001031-00	WAFER 3PIN P=2MM	
CON706		43-9A2001021-00	WAFER 2PIN P=2MM	
CON707		43-9A2501041-00	WAFER 4PIN P=2.5MM	
CON708		43-9A2501051-00	WAFER 5PIN P=2.5MM	
D707-710	⚠	15-0000RL202-00	DIODE RL-202	
D711,712		15-0001N4001-00	DIODE 1N4001	
D714-717		15-0001N4148-00	DIODE 1N4148	
FUSE	⚠	46-235420100-01	GLASS FUSE 3.5A 250V	
IC704		16-BA5417000-01	IC - BA5417	
IC703		16-LC7534200-00	IC - LC75342	
Q723		11-2SB772000-00	TR-2SB772P	
Q719,724,729		11-8550C0002-00	TR-8550C	
Q715-718,720, Q721,725-728, Q730		11-9014C0001-00	TR-9014C	
Q713,714		11-KSD882Y02-01	TR-KSD882Y	
ZD704		12-110203100-02	ZENER DIODE 10V	
ZD705		12-162103100-00	ZENER DIODE 6.2V	
ZD703		12-182103100-00	ZENER DIODE 8.2V	

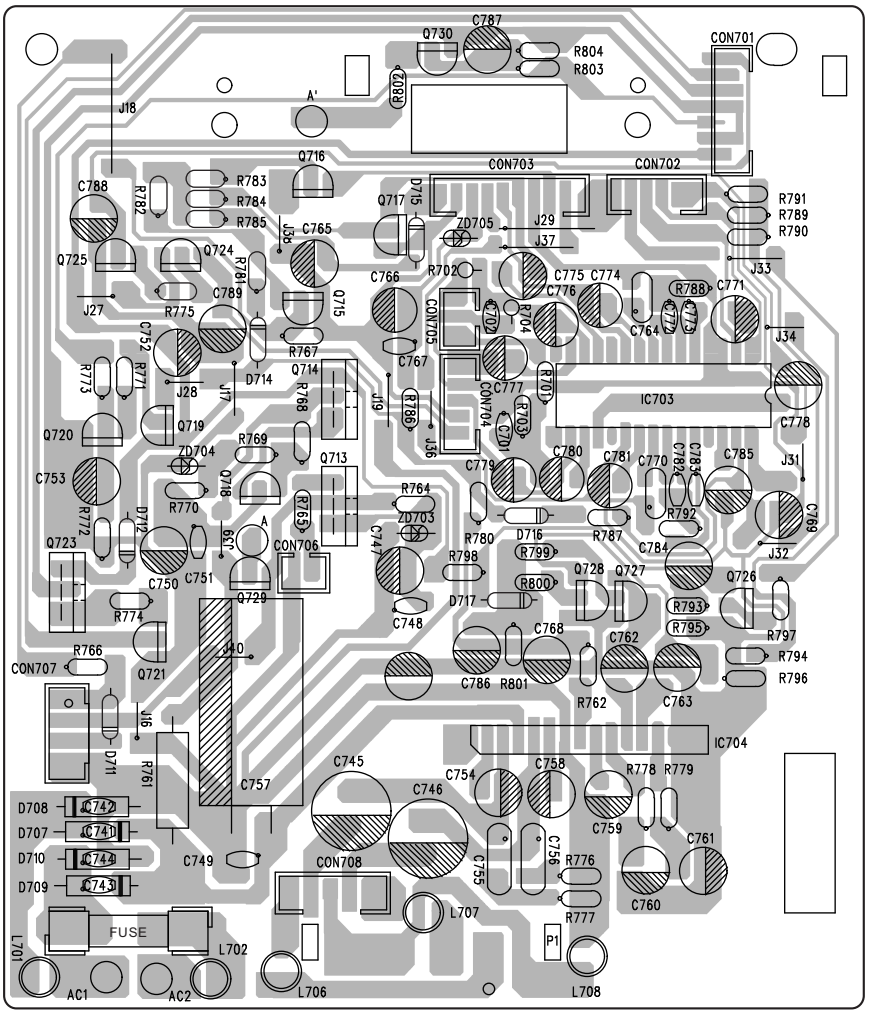
DISPLAY PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	01-EXM100004-00	DISPLAY PCB ASSY	
	48-EXM100004-00	DISPLAY PCB	
LED401	13-1MSC32DC0-31	LED 2.94MM (RED)	
D1,D2	13-1SB14E200-00	LED 5MM(BLUE)	
LCD401	13-5EXM10000-02	LCD DISPLAY IS06382P00	

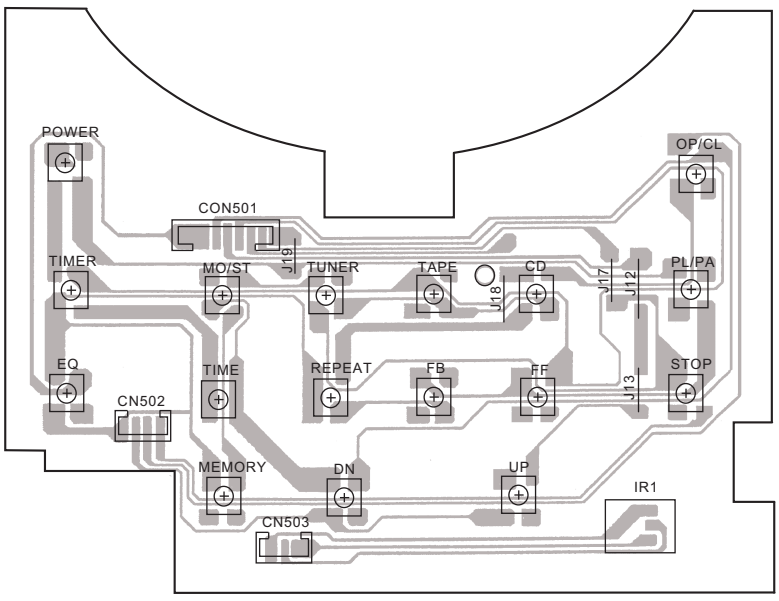
KEY PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	01-EXM100005-00	KEY PCB ASSY	
	48-EXM100005-01	KEY PCB	
	41-151100000-0V	TACT SWITCH H=5MM	
CON501	43-9B2001071-00	WAFER 7PIN P=2MM	
CON502	43-9B2001040-00	WAFER 4PIN P=2MM	
CON503	43-9B2001031-00	WAFER 3PIN P=2MM	
IR1	17-57138V400-02	OPTIC SENSER	

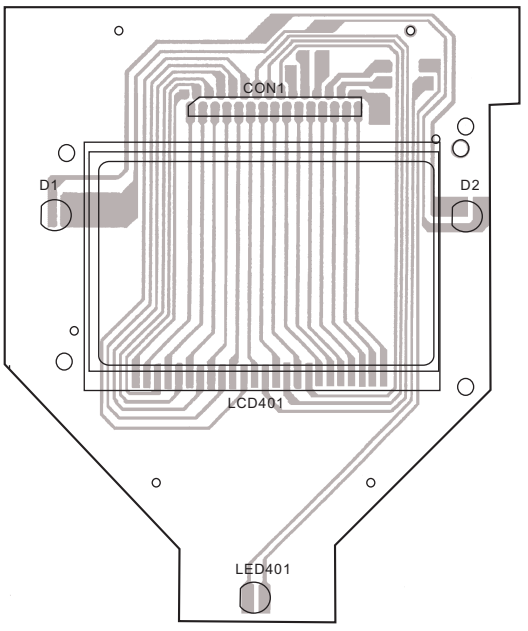
POWER PCB



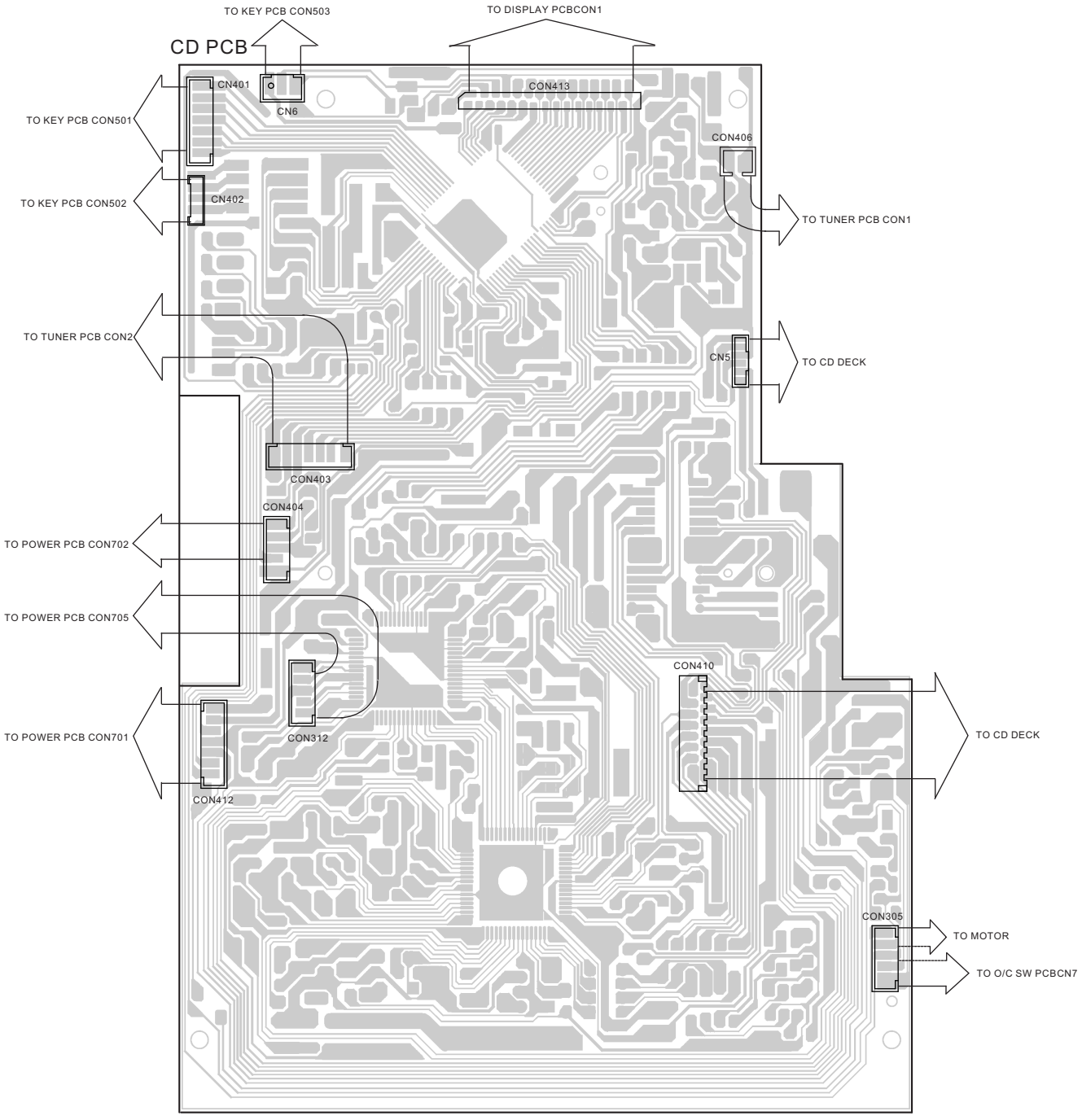
KEY PCB

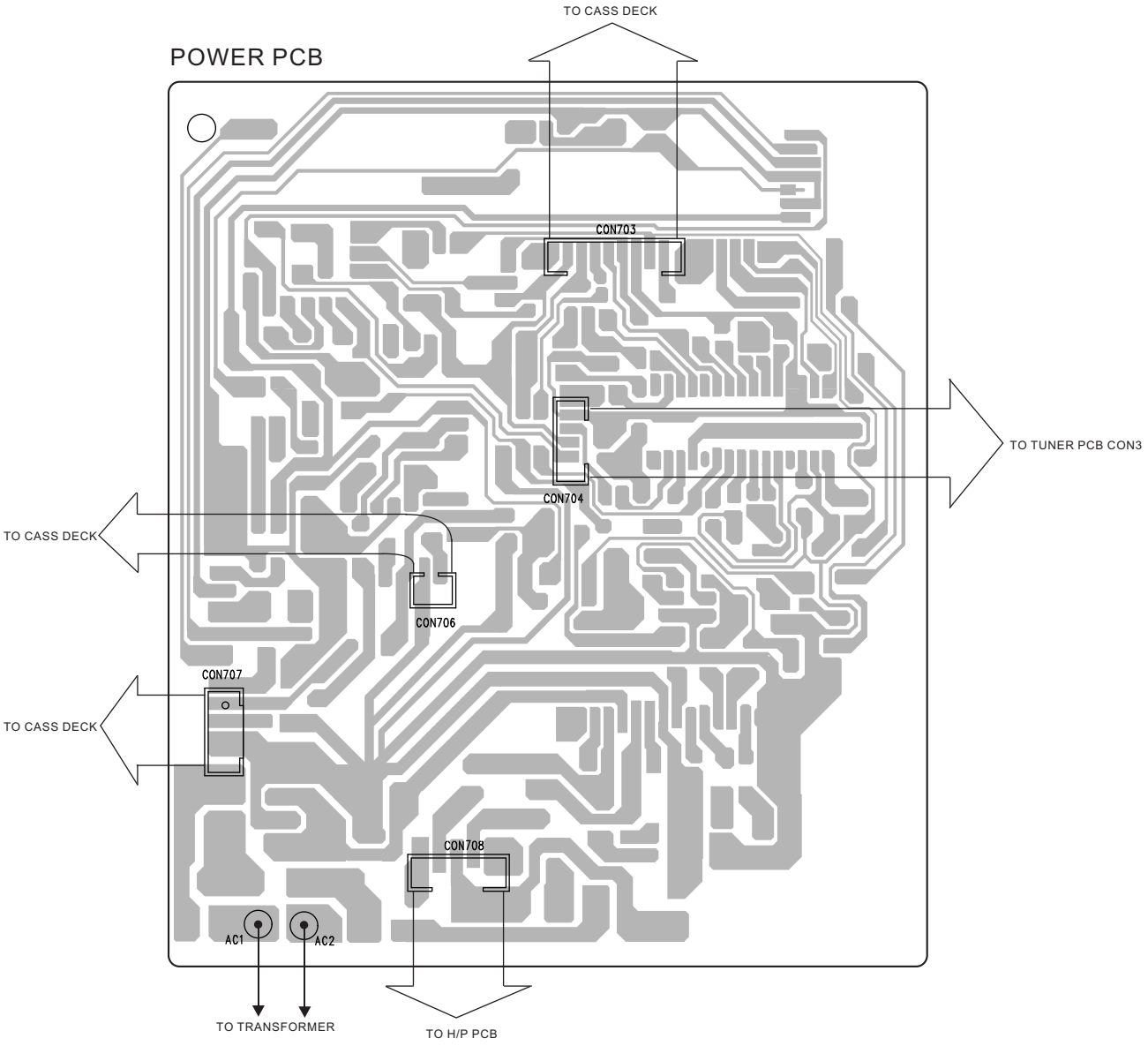


DISPLAY PCB



6 WIRING DIAGRAM




POWER PCB
TO CASS DECK
CON703
TO TUNER PCB CON3
CON704
TO CASS DECK
CON706
CON707
TO CASS DECK
CON708
AC1
AC2
TO TRANSFORMER
TO H/P PCB

6 INCLUDED ACCESSORIES

INCLUDED ACCESSORIES

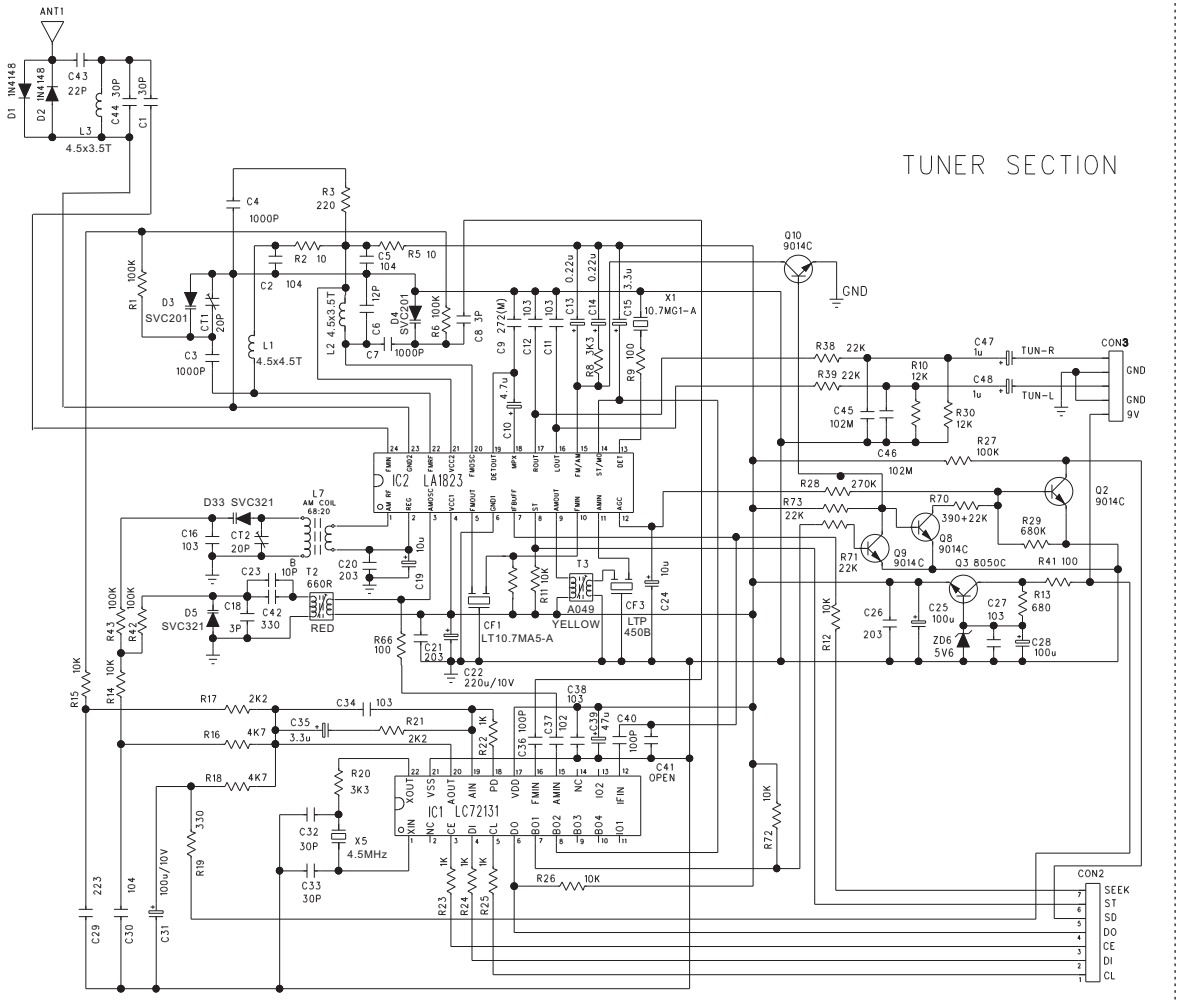
REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	77-14D120000-01	WARRANTY CARD	
	77-20EXM1000-00	INSTRUCTION BOOK	
	01-EXM10000-00	REMOTE CONTROL	

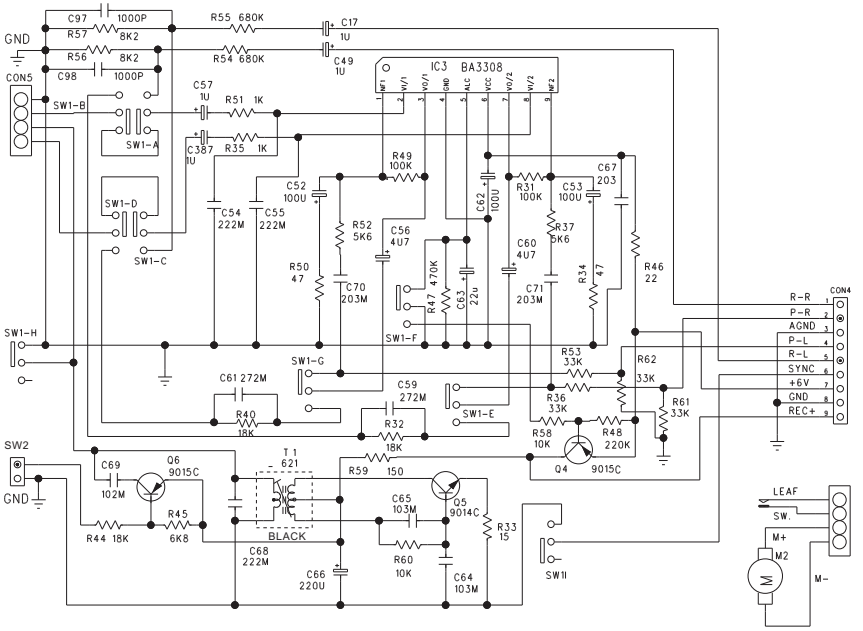
EX-M1

TEAC

TEAC CORPORATION	3-7-3 Nakacho, Musashino-shi, Tokyo 180-8550, Japan Phone:(0422)52-5081
TEAC AMERICA, INC.	7733 Telegraph Road, Montebello, California 90640 Phone: (323)726-0303
TEAC CANADA LTD.	5939 Wallace Street, Mississauga, Ontario L4Z 1Z8, Canada Phone: (905)-890-8008
TEAC MEXICO, S.A.De C.V.	Campesinos 184, Col. Granjas Esmeraida, 09810, Mexico Phone: (525)-581-5500
TEAC UK LIMITED	5 Marlin House, Croxley Business Park, Watford, Hertfordshire, WD188TE, U.K. Phone: 01923-819699
TEAC DEUTSCHLAND GmbH	Bahnstrasse 12, 65205 Wlesbaden-Erbenheim, Germany Phone:0611-71580
TEAC FRANCE S.A.	17, Rue Alexis-de-Tocqueville, CE 005 92182 Antony Cedex, France Phone:(1)42.37.01.02
TEAC NEDERLAND BV	Oeverkruid 15, NL-4941 W Raamsdonksveer, Nederland Phone:0162-510210
TEAC BELGIUM NV/SA.	c/o TEAC NEDERLAND BV, Oeverkruid 15, NL-4941 W Raamsdonksveer, Nederland Phone:+31-162-510860
TEAC ITALIANA S.p.A.	Via C, Cantu 11, 20092 Cinisello Balsamo, Milano, Italy Phone:02-66010550
TEAC AUSTRALIA PTY., LTD. A.B.N. 80 005 408 462	280 William Street, Melbourne VIC 3000, Australia Phone:(03)9672-2400

PREPARED IN HONG KONG

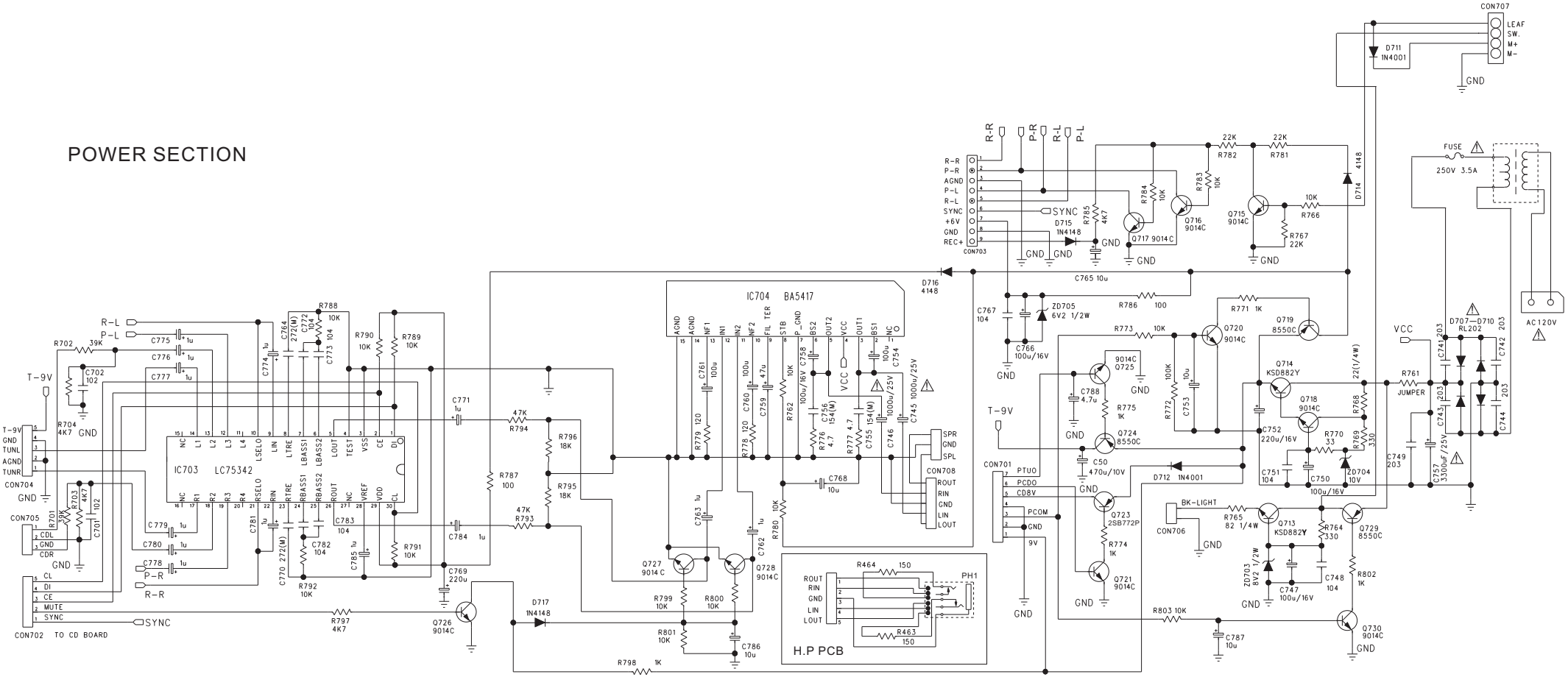




EX-M1

CD Receiver System

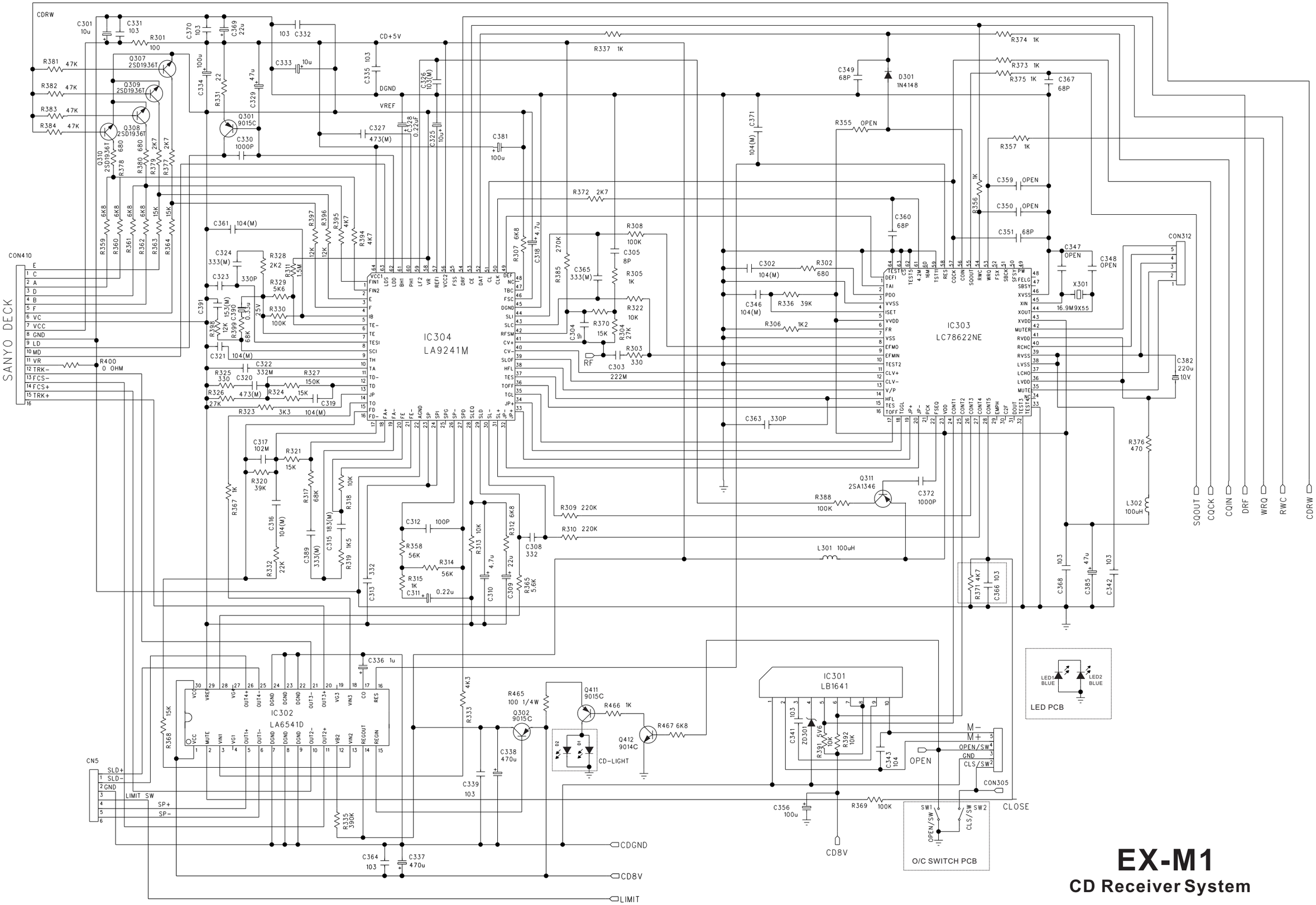
POWER SECTION



EX-M1

CD Receiver System

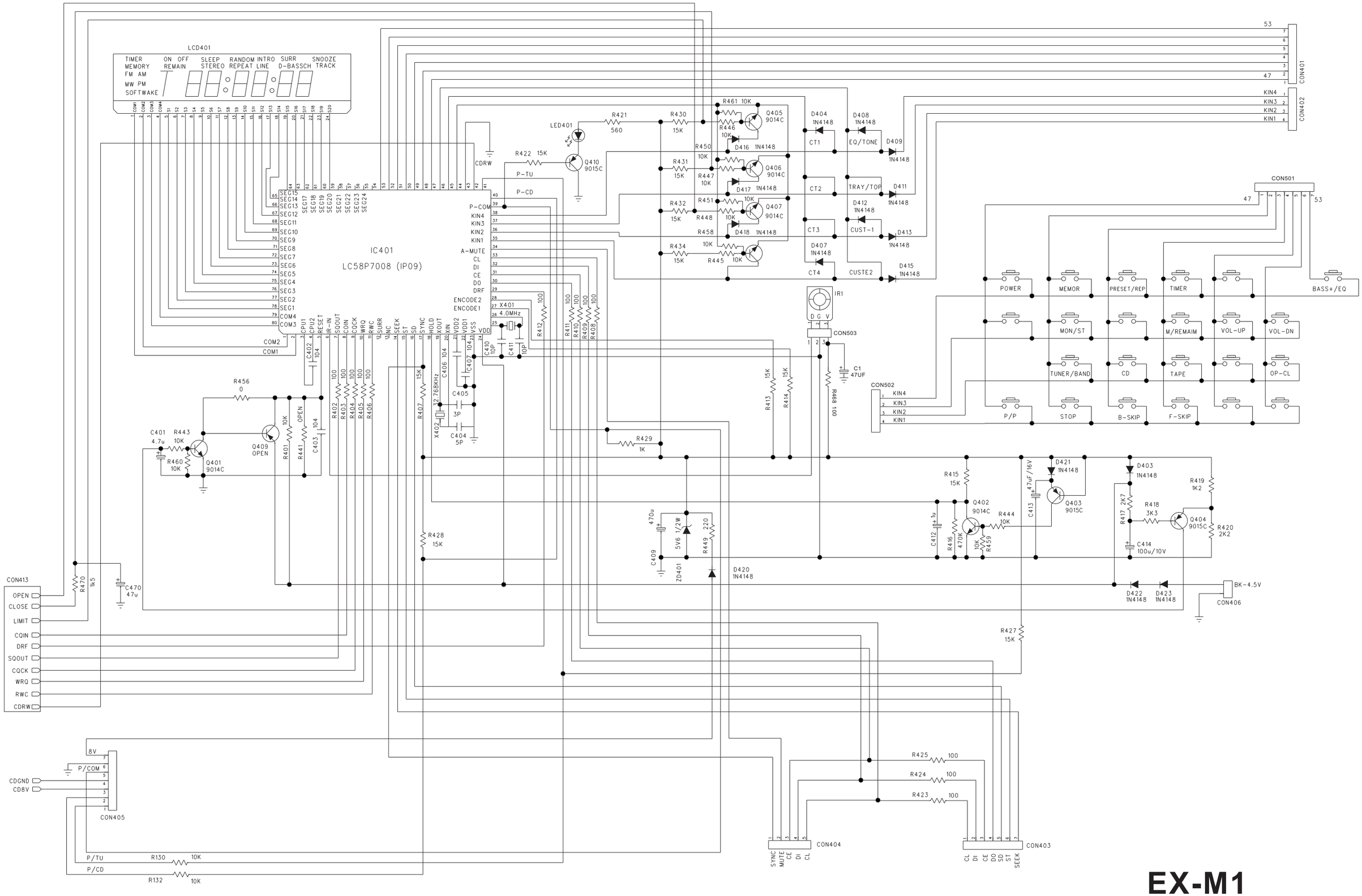
CD SECTION



EX-M1

CD Receiver System

MCU SECTION



EX-M1

CD Receiver System